
McCLEAN COUNTY

(McClean County Water Service Area Map)

- Estimated 1999 population of 9,700--90% on public water
- Estimated 2020 population of 9,500--94% on public water
- 240 miles of water lines, with plans for 27 additional miles
- Estimated funding needs for public water 2000-2005: \$5,338,000
- Estimated funding needs for public water 2006-2020: \$2,570,000

McLean County had an estimated population of 9,658 (4,051 households) in 1999 with a projected population of 9,500 (4,400 households) in 2020. Public water is provided to 3,650 customers, or about 90 percent of the county's residents. In areas of the county not served by public water, about 7 of 8 households rely on private domestic wells and 1 of 8 households rely on other sources. 195 households will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
McLEAN								-
Beech Grove	5	43	53				300	353
Livermore	1	15	35			50		85
N. McLean County Water District	2		40	424			500	964
Calhoun				236		3,200		3,436
Island	4	12	100					100
Sacramento	6	125	145	5	250			400
TOTAL	18	195	373	665	250	3,250	800	5,338

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
McLEAN								-
N. McLean County Water District	9		500		50			550
Calhoun							1,000	1,000
Sacramento				20			1,000	1,020
TOTAL	9	-	500	20	50	-	2,000	2,570

WATER SERVICE AREAS

MCLEAN COUNTY

Kentucky

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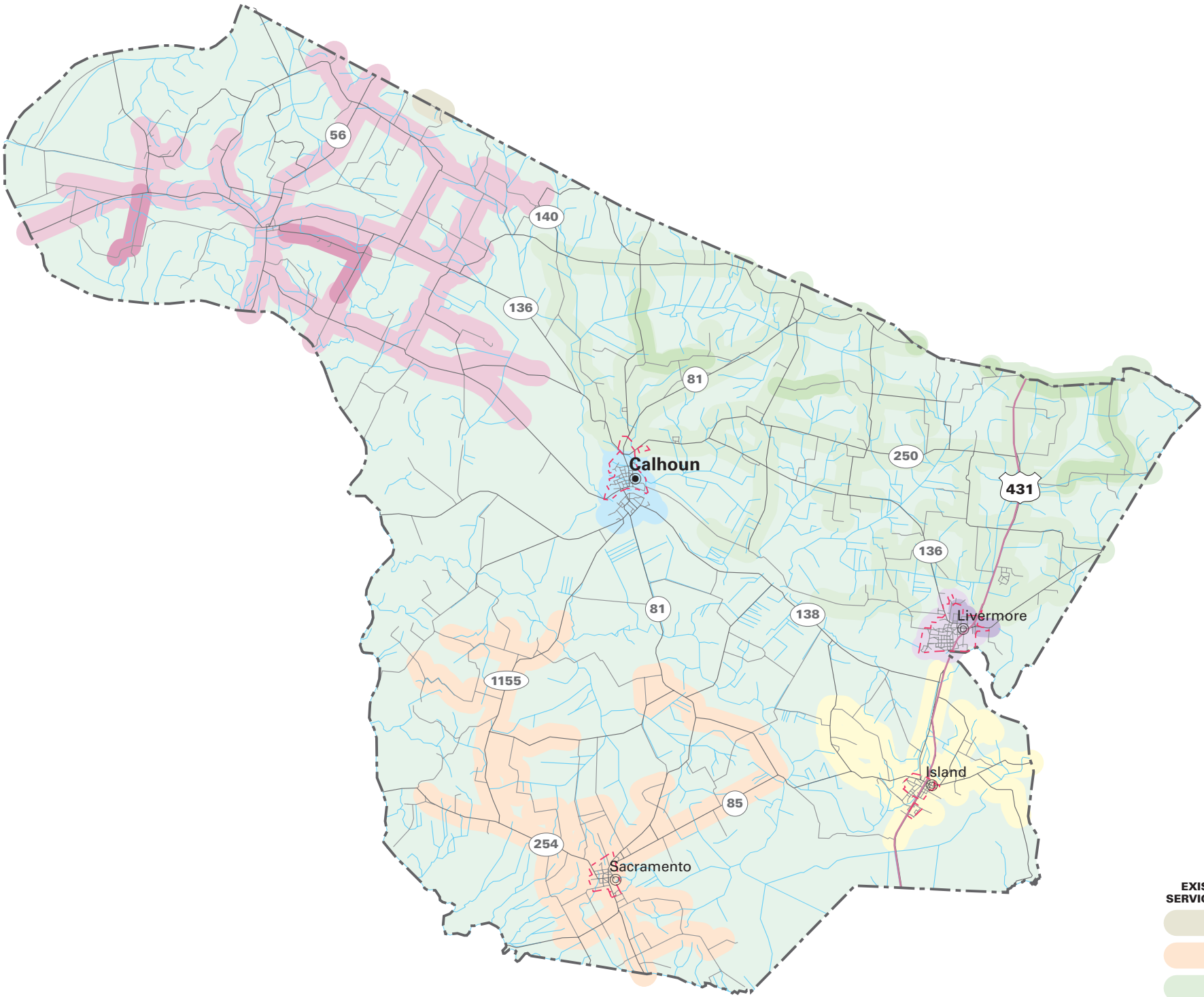
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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		WEST DAVIESS COUNTY WATER DISTRICT
		SACRAMENTO WATER WORKS
		NORTH MCLEAN COUNTY WATER DISTRICT
		LIVERMORE WATER WORKS
		ISLAND WATER DEPARTMENT
		CALHOUN WATER WORKS
		BEECH GROVE WATER BOARD

PUBLIC WATER SYSTEMS

The residents of McLean County are presently provided water by 6 public systems: 5 municipal, Sacramento Water Works, Beech Grove Water Board, Livermore Water Works, Island Water Department, and Calhoun Water Works; and 1 water district, North McLean County Water District.

SACRAMENTO WATER WORKS

PWSID: 0750907
System Type:..... COMMUNITY
Owner Type: MUNICIPAL
Surface Source:
Purchase Source: MULHENBERG COUNTY WATER DISTRICT
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons):..... 250,000.00
Total Service Connections: 704.00
Number of Employees:..... 3.00
Treatment Operator Class:.....2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons:..... 5.38
O/M costs 1997:.....Not available
O/M costs per Service Connection:Not available
Net Revenue 1997:Not available
Total Water Produced 1997 (gallons):.....Not available
Water Sold 1997 (gallons):.....Not available
Unaccounted-for Water 1997 (%):Not available

The Sacramento Water Works currently purchases water from the Muhlenburg County Water District. The District currently services 705 households in McLean County. The Districts' storage system consists of one 250,000-gallon storage tank. The calculated charge for 5,000 gallons of treated water for residential customers is \$24.40 within the Sacramento City limits and \$29.40 outside the Sacramento City limits.

The need for water service expansion in the Sacramento Water Works district consists of primarily providing water to two subdivisions. All other projects consist of upgrading existing lines, the construction of a new 1,000,000-gallon storage tank, and the development of an alternate water source for emergencies. Upgrading lines and construction of a new tank will improve water pressure through out the system. According to the University of Louisville, McLean County will experience no growth or a decline in population over the

next twenty years. To meet current as well as the future needs of the county, projects have been selected and ranked by Sacramento Water Works representatives, elected officials, and members of the Green River Area Development District Water Supply Planning Council as being crucial to the future growth and development of region.

BEECH GROVE WATER BOARD

PWSID:..... 0750529
System Type:..... COMMUNITY
Owner Type:..... MUNICIPAL
Surface Source:
Purchase Source:..... HENDERSON WATER DISTRICT
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons):..... 300,000.00
Total Service Connections: 420.00
Number of Employees:..... 2.00
Treatment Operator Class:.....2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons:..... 6.75
O/M costs 1997:..... 151,181.05
O/M costs per Service Connection: 336.71
Net Revenue 1997:..... 11,616.54
Total Water Produced 1997 (gallons):..... 4,533,057.00
Water Sold 1997 (gallons):..... 3,926,386.00
Unaccounted-for Water 1997 (%): 13.38

The Beech Grove Water Board currently purchases its water from the West Daviess County Water District and the Henderson County Water District. Beech Grove currently serves approximately 420 households. The district's storage system consists of two tanks. The total storage capacity is 116,000 gallons. The calculated charge for 2,000 gallons of treated water for residential usage is \$13.50. The system only employs one certified distribution operator and one clerk for billing and financial oversight.

Beech Grove is currently looking at constructing two tanks, a 100,000-gallon and a 200,000-gallon. The system is also looking at extending lines out Hwy 56 and McGee Chapel Road. The water district would also like to tie several lines together to improve water pressure throughout the system. To meet current as well as future needs of the county, projects have been selected and ranked by the Beech Grover Water Board representative, elected officials,

and members of the Green River Area Development District Water Supply Planning Council as being crucial to the future growth and development of region.

LIVERMORE WATER WORKS

PWSID: 0750252
System Type: COMMUNITY
Owner Type: MUNICIPAL
Surface Source: ROUGH RIVER
Purchase Source:
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 0.50
Percent Daily Average Production: 41.00
Total Tank Storage Capacity (gallons): 270,000.00
Total Service Connections: 741.00
Number of Employees: 3.00
Treatment Operator Class: 2D
Distribution Operator Class: 3A
Customer Rate for 1,000 Gallons: Not available
O/M costs 1997: Not available
O/M costs per Service Connection: Not available
Net Revenue 1997: Not available
Total Water Produced 1997 (gallons): Not available
Water Sold 1997 (gallons): Not available
Unaccounted-for Water 1997 (%): Not available

Livermore Water works currently draws and treats water from Green and Rough Rivers. According the McLean County Water Supply Plan they have an adequate water supply to support future needs. The system currently serves 700 households in McLean County. They sells treated water to the North McLean County Water District. Livermore operates a water treatment plant with a 500,000 gallon per day treatment capacity. The water plant currently produces 80% of the designed daily capacity. The system maintains two water storage tanks for a total capacity of 470,000-gallons. The distribution system and the treatment system currently employees two certified treatment operators and distribution operators. The other employees provide billing and financial oversight.

The City of Livermore is currently pursuing four projects. Only two of the projects involve the extension of water lines. Since other water districts surround the water district, there are no unserved areas in which to expand. The other two projects involve work on the treatment plant. The current plant needs to be upgraded to meet new drinking water standards. Over a long period of time the water district would like to construct a new water

plant, a raw water intake and line, and to extend a line across the Green River. To meet current as well as the future needs of the county, projects have been selected and ranked by the McLean County system representative, elected officials, and the Green River Area Development District Water Supply Planning Council.

NORTH MCLEAN COUNTY WATER DISTRICT

PWSID:..... 0750320
System Type:..... COMMUNITY
Owner Type:..... WATER DISTRICT
Surface Source:
Purchase Source:
Well Source:
Sells Water to:.....CALHOUN WATER WORKS
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons):..... 400,000.00
Total Service Connections: 1,114.00
Number of Employees:..... 3.00
Treatment Operator Class:.....2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons:..... 3.82
O/M costs 1997:..... 303,397.00
O/M costs per Service Connection: 272.10
Net Revenue 1997:..... 60,704.00
Total Water Produced 1997 (gallons):..... 0.00
Water Sold 1997 (gallons):..... 94,308.00
Unaccounted-for Water 1997 (%): 8.50

The North McLean County Water District currently purchases water from the City of Livermore, the City of Calhoun, and the West Daviess County Water District. The Water District currently serves 1,086 residential customers. The district's storage capacity consists of two tanks with a combined storage capacity of 410,000-gallons. The North McLean County Water District employs two distribution operators and one person for billing and financial maintenance.

The water district has a multitude of small water mains that they are actively trying to upgrade. By upgrading many of these lines, pressure problems will be solved and the larger lines will allow for growth within the district. The water district would also like to add a 500,000-gallon water tank. This project will also serve to reduce the pressure problems that exist throughout the system. To meet current as well as future needs of the county, projects

have been selected and ranked by the McLean County system representatives, elected officials, and the Green River Area Development District Water Supply Planning Council.

ISLAND WATER DEPARTMENT

PWSID: 0750207
System Type: COMMUNITY
Owner Type: MUNICIPAL
Surface Source:
Purchase Source:
Well Source: Yes
Sells Water to:
Treatment Plant Capacity (MGD): 0.25
Percent Daily Average Production: 50.00
Total Tank Storage Capacity (gallons): 150,000.00
Total Service Connections: 512.00
Number of Employees: 4.00
Treatment Operator Class: 2D
Distribution Operator Class: 2A
Customer Rate for 1,000 Gallons: Not available
O/M costs 1997: Not available
O/M costs per Service Connection: Not available
Net Revenue 1997: Not available
Total Water Produced 1997 (gallons): Not available
Water Sold 1997 (gallons): Not available
Unaccounted-for Water 1997 (%): Not available

The Island Water Department currently draws water from two wells. The city is planning to run a line that will interconnect with the city of Calhoun. This will allow the city to begin purchasing water from Calhoun and use the existing wells as a backup source. The system currently serves approximately 480 residents. The district operates a water treatment plant that has a production capacity of 259,000-gallons per day. The system currently maintains a 150,000-gallons storage tank. The system only employs one certified treatment plant operator and distribution operator. All other employees assist the operator in his duties and maintain financial records.

The Island Water Department only foresees the need to expand into one unserved area. This project will serve the “Knobs” area. Other water districts surround the District therefore; there aren’t any new areas in which to expand. To meet current as well as the future needs of the county, projects have been selected and ranked by the McLean County system representatives, elected officials, and the Green River Area Development District Water Supply Planning Council as being crucial to the future growth and development of region.

CALHOUN WATER WORKS

PWSID: 0750055
System Type: COMMUNITY
Owner Type: MUNICIPAL
Surface Source: GREEN RIVER
Purchase Source: NORTH MCLEAN COUNTY WATER DISTRICT
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 1.00
Percent Daily Average Production: 44.00
Total Tank Storage Capacity (gallons): 250,000.00
Total Service Connections: 507.00
Number of Employees: 3.00
Treatment Operator Class: 2D
Distribution Operator Class: 3A
Customer Rate for 1,000 Gallons: Not available
O/M costs 1997: Not available
O/M costs per Service Connection: Not available
Net Revenue 1997: Not available
Total Water Produced 1997 (gallons): Not available
Water Sold 1997 (gallons): Not available
Unaccounted-for Water 1997 (%): Not available

Calhoun Water Works currently gets its water from the Green River and according to the county water supply plan has an adequate supply of raw water to support future needs. The system serves 506 households and sells water to the North McLean County Water District. The system will begin selling treated water to the City of Island within the next two years. The system operates a water treatment plant that has a production capacity of 1 million gallons per day. On an average, only 497,000 gallons per day are produced, or less than 45% of its designed capacity. The system maintains two tanks with a total capacity of 750,000-gallons. Calhoun Water currently employs three certified distribution and treatment plant operators. All other employees provide billing and financial oversight.

The City of Calhoun is surrounded by other existing water systems therefore there aren't many areas into which they can expand. The District would like to upgrade several lines within the system and if the county water districts decide to consolidate and purchase water from Calhoun then the treatment plant will have to be expanded. To meet current as well as future needs of the county, projects have been selected and ranked by the McLean County systems representatives, elected officials, and the Green River Area Development District Water Supply Planning Council as being crucial to the future growth and development of region.

PRIVATE DOMESTIC SYSTEMS

About 950 residents of McLean County rely on private domestic water systems: 850 on wells and 100 on other sources.

In McLean County most wells from depths of less than 300 feet are adequate for a domestic supply. Wells located in the Green River flood plain can produce as much as 100 gallons of hard water per minute. In a thin highly faulted zone running east west across the county between the towns of Beach Grove and Nuckols, yields to drilled wells are unpredictable due to the faulting.

Generally, ground water is hard to very hard and iron and salt may be present in objectionable amounts. Often ground water becomes saltier with depth.
